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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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Reising, Ethington, Barnes, Kisselle,
Learman & McCulloch, P.C.
5291 Colony Drive North
Saginaw, MI 48603

EXAMINER

WALSH, BRIAN D

ART UNIT

PAPER NUMBER

3722

DATE MAILED: 09/25/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/766,025

Applicant(s)

VOIGT ET AL.

Examiner

Brian Walsh

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 August 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-12 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7-11 is/are allowed.
- 6) ☒ Claim(s) 1-3 and 12 is/are rejected.
- 7) ☒ Claim(s) 4-6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☒ The proposed drawing correction filed on 19 August 2002 is: a) ☐ approved b) ☒ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s) _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Drawings

1. The objections to the drawings regarding non-reference character text and dimensional characteristics have been withdrawn.
2. The objection to the drawings regarding the "...the [first/second] wall plane [that] intersect the rotor axis..." stands. The examiner has carefully reviewed Applicant's arguments regarding this matter and has found them not persuasive. Applicant asserts "a first wall plane intersect rotor axis" is a basic definition of a rotary cutter. The Examiner contests this allegation, and therefore maintains that the "first wall plane intersecting the rotor axis" is a special technical element specifically claimed in the instant invention and therefore must be illustrated in the drawings.

Specification

3. The objection to the specification has been withdrawn.

Claim Objections

4. The objection to claim 11 has been withdrawn.

Claim Rejections - 35 USC § 112

5. Claim rejections based on 35 USC § 112 for lacking proper antecedence have been withdrawn.

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6. Applicant's arguments filed regarding the rejections based on 35 USC § 112 relating to the "...[first or second] wall plane intersects rotor axis..." in claims 1, 4, 7 and 11 have been withdrawn. The rejections regarding this matter have been withdrawn because further review of the application revealed that the specification provided a full, clear and concise explanation in such a way that one of ordinary skill in the art could make or use the invention. Furthermore, the claims did not fail to particularly point out and distinctly claim the subject matter which the applicant regards as his invention. However, the objection(s) to the drawings regarding this matter stand, please refer to the "Drawings" section above.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2 and 12 are finally rejected under 35 U.S.C. 103(a) as being unpatentable over Meis in view of Boboltz et. al. and further in view of Nielsen et. al..

Regarding claims 1, 2 and 12, Meis discloses a rotary cutting tool (12) having a plurality of grooves (16) in the rotor extending from end to end. A first groove wall (15) in a first wall plane extending axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation wherein the first wall plane intersects the rotor axis. A plurality of first base support surfaces (15A) each in a base support plane that is perpendicular to the first wall plane wherein all the base support planes that are perpendicular to

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the first groove wall intersect each other. Meis further discloses a plurality of first rectangular cutter blades (24) each of which have a left and right end, a cutting edge (22) and a base (24b) that is parallel to the cutting edge. The base (24b) of the cutting insert (24) is seated on one of the plurality of first base support surfaces (15a). At least one clamp member (36) clamping the plurality of first rectangular flat cutter blades (24) to the first groove wall (15). Meis further discloses that the first groove wall (15) is a trailing groove wall wherein the rotation of the tool (12) the clamp (36) is arranged before the cutting blade (24). Meis fails to disclose a rotary cutting tool with bearing supports.

Boboltz et. al. discloses a rotary cutting tool (10) similar to that of the instant invention with a rotor having an outer surface (14), a left and right end, a rotor axis (11), a left end bearing support (12) and a right end bearing support (12a) concentric with the rotor axis, each bearing support extending axially to their respective ends.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rotary tool of Meis to include the bearing supports of Boboltz et. al. since Boboltz et. al. teaches the supports are needed in order for the rotary cutter to be rotatably mounted (Col. 3, lines 8-10).

Meis and Boboltz et. al. disclose all of the elements as set forth in the above rejection, however, Meis and Boboltz et. al. fail to disclose a cutter blade that is seated on a support surface.

Nielson et. al. discloses a helical cutter system including a rectangular cutter blade (33) that is seated on one of a plurality of support surfaces (See figure 6) including a first wall plane (13) that intersects the rotation axis of the cutter.

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Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the helical cutter systems of Meis and Boboltz et. al. to include the cutter seating arrangement of Nielsen et. al., since Nielsen et. al. teaches the use of the seating arrangement in order to clamp the blades securely into the holder (Col. 1, lines 38 – 43).

3. Claims 1 and 3 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lovendahl in view of Boboltz et. al. and in further view of Nielsen et. al.

Regarding claims 1 and 3, Lovendahl discloses a rotary cutting tool (13) having a plurality of grooves (15) in the rotor extending from end to end. A first groove wall (19b) in a first wall plane extending axially from the left end wall to the right end wall, extending outward away from the rotor axis and in the direction of rotation wherein the first wall plane intersects the rotor axis. A plurality of first base support surfaces (16) each in a base support plane that is perpendicular to the first wall plane wherein all the base support planes that are perpendicular to the first groove wall intersect each other. Lovendahl further discloses a plurality of first rectangular cutter blades (43) each of which have a left and right end, a cutting edge (44) and a base (18c) that is parallel to the cutting edge. The base (18c) of the cutting insert (43) is seated on one of the plurality of first base support surfaces (16). At least one clamp member (20) clamping the plurality of first rectangular flat cutter blades (43) to the first groove wall (19b). Lovendahl further discloses that the first groove wall (19b) is a leading groove wall wherein the rotation of the tool (13) the clamp (20) is arranged aft the cutting blade (43). Lovendahl fails to disclose a rotary cutting tool with bearing supports.

Boboltz et. al. discloses a rotary cutting tool (10) similar to that of the instant invention with a rotor having an outer surface (14), a left and right end, a rotor axis (11), a left end bearing support (12) and a right end bearing support (12a) concentric with the rotor axis, each bearing support extending axially to their respective ends.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the rotary tool of Lovendahl to include the bearing supports of Boboltz et. al. since Boboltz et. al. teaches the supports are needed in order for the rotary cutter to be rotatably mounted (Col. 3, lines 8-10).

Lovendahl and Boboltz et. al. disclose all of the elements as set forth in the above rejection, however, Lovendahl and Boboltz et. al. fail to disclose a cutter blade that is seated on a support surface.

Nielson et. al. discloses a helical cutter system including a rectangular cutter blade (33) that is seated on one of a plurality of support surfaces (See figure 6) including a first wall plane (13) that intersects the rotation axis of the cutter.

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the helical cutter systems of Lovendahl and Boboltz et. al. to include the cutter seating arrangement of Nielsen et. al., since Nielsen et. al. teaches the use of the seating arrangement in order to clamp the blades securely into the holder (Col. 1, lines 38 – 43).

Allowable Subject Matter

4. Claims 7-11 are allowed.

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5. Claims 4-6 and 8-10 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: claims 4 and 7 are drawn to a helical rotary cutter including the limitation of a second set of groove walls perpendicular to a second plurality of base support surfaces to interact with a second plurality of flat cutter blades, the first and second set of flat cutter blades being held in the first and second set of base support surfaces by a single clamping arrangement. Claim 11 discloses a method of making a helical rotary cutter comprising the allowable subject matter set forth above. The combination of elements including the first and second set of flat cutter blades being arranged in a first and second set of base support surfaces both sets of blades being held by a single clamping arrangement was not disclosed nor rendered obvious by the prior art.

Response to Arguments

6. Applicant's arguments filed 19 August 2002 have been fully considered but they are not persuasive.

The Examiner has withdrawn the 35 USC § 112 rejections regarding the "[first or second] wall plane [that] intersects the rotor axis" and therefore this portion of Applicant's arguments will not be addressed.

Regarding Claim 1, Applicant states that Boboltz et. al., though clearly stated in the abstract and specification, is not a helical rotary cutter. Applicant also states that Meis does not disclose a helical cutter. While the justification of naming the cutter "helical" may be

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questioned, the technical features of interest in Meis and Boboltz et. al. are not related to the helical nature of the tool. With the exception of the preamble, Applicant has not disclosed in the claims any specific elements which would limit the cutter to being of the helical type. The cutter system, as claimed, would function properly were it used in a cutter with cutting edges not helical in nature.

Applicant's remaining arguments are moot in view of the new grounds of rejection.

Faxing of Responses to Office Actions

7. In order to reduce pendency and avoid potential delays, TC 3700 is encouraging FAXing of responses to Office Actions directly into the Group at (703) 872-9302. This practice may be used for filing papers not requiring a fee. It may also be used for filing papers which require a fee by applicants who authorize charges to a PTO deposit account. Please identify the examiner and art unit at the top of your cover sheet. Papers submitted via FAX into TC 3700 will be promptly forwarded to the examiner.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Walsh whose telephone number is (703) 605-0638. The examiner can normally be reached on Monday - Friday 7:30 A.M. to 4:00 P.M..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Andrea Wellington can be reached on (703) 308-2159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9303 for After Final communications.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1148.

BDW

BDW

September 23, 2002

A. L. Wellington

A. L. WELLINGTON
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 3700